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United States Department of Agriculture,

BUREAU OF PLANT INDUSTRY,

Office of Congressional Seed Distribution,

WASHINGTON, D. C.

TULIP AND NARCISSUS BULBS.

DIRECTIONS FOR PLANTING.

The bulbs sent herewith are of two kinds—(1) tulip and (2) narcissus. (Figs. 1 and 2.)

These bulbs should be planted immediately in light, rich soil that has been dug to a depth of at least 10 inches. The tulip bulbs should be set 5 inches apart and 4 inches deep and the narcissus bulbs about 10 inches apart and 5 inches deep.

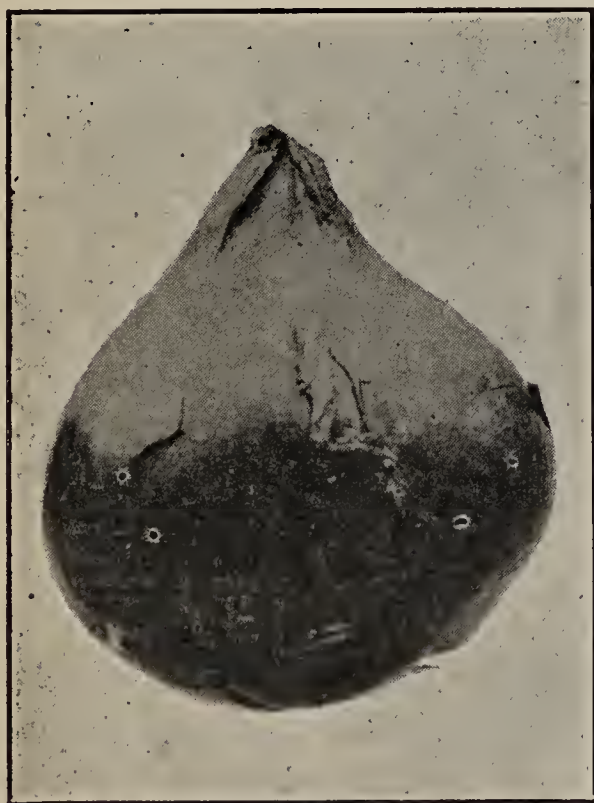


FIG. 1.—Bulb of tulip.



FIG. 2.—Bulb of narcissus.

If they are to be grown in pots or window boxes light, rich soil should be used. Place 1 to 2 inches of cinders or broken pots in the bottoms of the pots or boxes to insure good drainage. After planting, place the pots or boxes out of doors and cover them with about 4 inches of ashes or sand; or they may be placed in a dark, cool room or cellar for a few weeks until the bulbs have formed a quantity

of roots. They may then be brought into the light and heat for flowering. Keep the soil well moistened, but avoid overmoistening, for if kept too wet the bulbs will decay.

CULTIVATION.

If planted in beds the surface of the soil should be loosened after each rain and the bed kept free from weeds. In the late fall or early winter months it is well to cover the beds with a light mulch of straw or leaves to prevent injury to the young roots from the alternate freezing and thawing of the soil. The bulbs are quite hardy and are not injured by severe cold if the soil is well drained.

LIFTING AND DIVIDING.

Tulip and narcissus plants are perennial, and if given proper care and grown under suitable soil and climatic conditions will increase and multiply from year to year. The bulbs may remain in the ground two or three years, or until the clumps begin to crowd. After blossoming in the spring, from four to six weeks should elapse to allow the foliage to die partially down, when the bulbs may be lifted with a spade or fork. Shake the soil from the roots and store the bulbs in a cool, shady place where they will ripen and cure. When the old leaves and roots are thoroughly dry they may be easily rubbed off and the clusters of bulbs divided. The bulbs may then be planted in the same manner as the original bulbs. In this way the stock may be increased in a few years. The plants succeed best in a sandy soil and a moist climate.

NATURALIZING THE NARCISSUS.

The narcissus often becomes naturalized when planted in the sod or partial shade, where it will continue to grow, blossom, and multiply for many years without further attention. Simply make a small hole in the soil 5 or 6 inches deep, insert the bulb pointed end up, press the soil over the top, and nature will do the rest. For naturalizing, avoid planting in rows or rigid geometrical figures. A good plan is to scatter the bulbs like seed and plant where they fall. This method of planting is extensively followed in the home grounds and parks of England and other countries in Europe. In portions of North Carolina, on large estates along the James River in Virginia, and in old gardens in New England, narcissuses that were planted over half a century ago are still growing vigorously and every spring produce beautiful displays of blossoms.

VARIETIES.

Several hundred varieties of both tulip and narcissus are listed in the catalogues of florists and seedsmen. Narcissus is the botanical name for the genus of which the daffodil and the jonquil are species.

The narcissus with large trumpets and flat leaves is commonly called the daffodil. Jonquils have glossy, dark-green, very narrow, three-cornered, or rushlike leaves. Most of the intermediate forms are hybrids. New varieties are originated by growing bulbs from seed resulting from crossing one type with another. This is a slow process, as several years are required to produce a mature bulb from seed.



FIG. 3.—Blossom of tulip.

DESCRIPTION OF VARIETIES.

A brief description of the Holland bulbs included in the congressional distribution follows. The varieties contained in the accompanying box are indicated by a pencil check mark on the margin of the list.

TULIPS.

ARTUS. Single, early, bright deep scarlet.

CHRYSOLORA. Single, early, very large, widely opened flower. Color a pure golden yellow.

COTTAGE MAID. A single, early tulip with a large pink and white blossom.

THOMAS MOORE. A single early variety with orange-colored blossom, sweet scented and handsome.

DARWIN (mixed). A distinct class of late-flowering tulips with vigorous foliage, tall, thick stems, and large cup-shaped flowers, with a wide range of color, except yellow. The inner portion of the flower is as attractive as the outside.

MISCELLANEOUS LATE-FLOWERING TULIPS, BIZARDS, AND BY-BLOOMS (mixed). These are later in flowering than the single, early varieties. The flowers are of different shapes and colors, many of them curiously striped and feathered.



FIG. 4.—Blooms of Emperor (*a*), Barrii Conspicuus (*b*), and Poeticus Ornatus (*c*), representing the three principal types of narcissus, with large, medium, and small crowns or trumpets.

NARCISSUSES.

POETICUS ORNATUS (pheasant's-eye or poet's narcissus; the true narcissus). Blossoms pure white, perianth with red, flat, saucer-shaped cup or crown. Very fragrant.

BARRII CONSPICUUS. Large soft-yellow perianth; short or intermediate form of cup, edged with orange scarlet.

EMPEROR. Pure golden yellow, very large, with immense trumpets.

EMPRESS. Pure white perianth with a large rich-yellow trumpet.

WHERE DUTCH BULBS ARE GROWN.

Tulips and narcissuses, as well as hyacinths, are known generally as Dutch bulbs, because the growing and marketing of these bulbs is one of the principal industries of the Netherlands. Bulbs are also grown extensively in southern France, in England, Ireland, and the Island of Guernsey. Most of the bulbs sold by florists and seedsmen in the United States are imported directly from the Nether-

lands, the annual importations amounting to nearly a million dollars in value. These bulbs can be propagated and grown successfully along the Atlantic and Pacific coasts and in the region of the Great Lakes, but owing to the cost of labor only limited areas have been planted. The largest areas devoted to bulb growing on a commercial scale in this country are to be found in the vicinity of Portsmouth and Richmond, Va., Newbern, N. C., Bellingham, Wash., and Santa Cruz, Cal. A single grower near Portsmouth, Va., has 65 acres in narcissuses, and during the blossoming seasons ships daily 2 tons or more of blossoms to eastern markets. Comparative tests on the trial grounds of this Department indicate that American-grown bulbs produce more vigorous plants and earlier, stronger, and better blossoms than imported bulbs. For this reason growers are advised to save their bulbs each year.

In order to encourage the growing of Dutch bulbs in this country on a commercial scale and to provide American-grown bulbs of superior quality for congressional distribution, the Department of Agriculture has established a bulb-propagating garden near Bellingham, Wash., where the conditions of soil and climate are similar to those in the Netherlands. At the proper time full information will be published regarding the best methods of cultivation and cost of production of bulbs at this garden. The results so far obtained are very encouraging, and it seems probable that in a few years the garden will supply all the bulbs required for the congressional distribution.

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Approved:
B. T. GALLOWAY,
Chief of Bureau.

SEPTEMBER 15, 1912.

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